Customer No.: 31561
Application No.: 10/711,573
Docket No.: 12853-US-PA

AMENDMENT

To the Claims:

Please amend the claims as follows:

1. (currently amended) A method for accessing memory, comprising the steps of:

~~dividing~~ providing a memory ~~into~~having N memory blocks, wherein N is an positive integer;

receiving a plurality of line data, and sequentially writing the line data into the ~~N~~memory blocks~~, wherein N is an integer~~; and

after writing more than ~~N/2+1~~x memory blocks, starting to read the line data stored in at least one of the written memory blocks, wherein x is a least integer not less than N/2+1.

2. (original) The method for accessing memory of claim 1, wherein the memory is a single port memory.

3. (currently amended) The method for accessing memory of claim 2, wherein the reading step is started after the writing of y~~the N/2+2~~ memory blocks is completed, wherein y is a least integer not less than N/2+2.

4. (currently amended) The method for accessing memory of claim 2, wherein the reading step ~~is started~~ firstly reads the from the ~~memory blocks which are written in a sequence of~~ the 1st memory block and the ~~(N/2+1)~~xth memory block.

5. (currently amended) The method for accessing memory of claim 1, wherein the storage capacity of the memory is the same as the size of the plurality of the line data.

6. (original) The method for accessing memory of claim 5, wherein the memory is a single port memory.

7. (canceled)

8. (canceled)

9. (canceled)

10. (original) The method for accessing memory of claim 1, wherein the writing further comprises the steps of:

dividing the line data into a plurality of even data and a plurality of odd data according to a sequence of the line data; and

writing the even data and odd data into the N memory blocks, respectively, wherein the memory block for writing the even data is different from the memory block for writing the odd data.

11. (currently amended) The method for accessing memory of claim 10, wherein the storage capacity of the memory is the same as the size of the plurality of the line data.

12. (original) The method for accessing memory of claim 10, wherein the memory is a single port memory.

13. (currently amended) The method for accessing memory of claim 10, wherein the reading step is started after the writing of ~~the N/2+2~~ y memory blocks is completed, wherein y is a least integer not less than N/2+2.

14. (canceled)

15. (canceled)

16. (currently amended) The method for accessing memory of claim 11, wherein the reading step is started after the writing of ~~the N/2+2~~ y memory blocks is completed, wherein y is a least integer not less than N/2+2.

17. (original) The method for accessing memory of claim 11, wherein the memory is a single port memory.

18.(canceled)

19.(canceled)

20. (new) The method of claim 1, wherein the plurality of line data having pixel data (0)- pixel data (M-1) constituting a line, the pixel data (0) – the pixel data ([M/2]) are even data of the line data and the pixel data ([M/2]+1) – the pixel data (M-1) are odd data of the line data, wherein [M/2] is the least integer not less than M/2;

wherein the size of the memory is equal to the size of the plurality of line data.

21. (new) The method claim 20, wherein the reading step reads both the k-th memory block and the [N/2+k]th memory block such that the even data and the odd data for one pixel are read at the same time for output, wherein k is an integer less than N/2.

22. (new) The method of claim 21, wherein after the reading step finished reading the k-th memory block and the [N/2+k]th memory block, the k-th memory block and the [N/2+k]th memory block are enabled for writing line data of a next line.

23. (new) A method for accessing a memory having N memory blocks, wherein N is a positive integer, the method comprising the steps of:

receiving and writing line data, having pixel data (0) – pixel data (M-1), into the i-th memory block and the [N/2+i]th memory block alternatively, wherein the pixel data (k) being even data if k is even else the pixel data (k) being odd data, i is an positive integer less than N/2, [N/2+i] is the least integer not less than N/2+i, M is an positive integer, k is a positive integer less than M; and

reading the pixel data from the memory after [N/2+1] memory blocks are written, wherein [N/2+1] is the least integer not less than N/2+1.

24. (new) The method of claim 23, wherein the size of the memory is equal to the size of the plurality of pixel data.

25. (new) The method claim 24, wherein the reading step sequentially reads from the memory blocks such that the even data of the line data are read first and then odd data of the line data are read.

26. (new) The method of claim 23, wherein after the reading step finished reading the j-th memory block, the j-th memory block is enabled for writing line data of a next line, wherein j is an positive integer less than M.